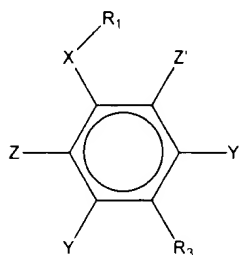


**IN THE CLAIMS**

Please replace the previous version of the claims with the following clean version, wherein Claims 8 and 21 have been amended. Claim 12 remains as it stood in the previous amendment, and Claims 17, 19 and 20 have been withdrawn from consideration.

8. A method of inhibiting picornavirus activity, comprising contacting the picornavirus with a compound of the formula:



wherein

X is selected from the group consisting of C=O, S=O, C=S, (C=O)-NH, (C=O)-O and (C=O)-S:

R<sub>1</sub> is selected from the group consisting of:

(i) hydrogen or a hydrocarbon chain from 1 to about 10 carbons long selected from the group consisting of saturated, unsaturated and fluorinated, wherein said hydrocarbon chain is unsubstituted or substituted with at least one R<sup>11</sup>, wherein R<sup>11</sup> is selected from the group consisting of:

(ia) C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, or C<sub>6</sub>-C<sub>10</sub> bicycloalkyl which may be substituted or unsubstituted;

(ib) aryl which may be substituted or unsubstituted, with the exception that R<sup>11</sup> cannot be an aryl when R<sub>1</sub> is an unsaturated hydrocarbon chain;

(ic) halogen, cyano, nitro, amino, hydroxy, adamantyl, carbamyl, carbamyl oxy or keto;

(id) an oligopeptide of 1-3 amino acid residues; and

(ie) NR<sup>13</sup>R<sup>14</sup>, CO<sub>2</sub>R<sup>13</sup>, O(C=OR<sup>13</sup>), SO<sub>2</sub>R<sup>14</sup>, SOR<sup>14</sup>, (C=O)NR<sup>13</sup>R<sup>14</sup>, or NR<sup>14</sup>(C=O)R<sup>13</sup>;

wherein:

R<sup>13</sup> is selected from the group consisting of hydrogen, phenyl, benzyl, C<sub>1</sub>-C<sub>6</sub> alkyl and C<sub>3</sub>-C<sub>6</sub> alkoxyalkyl; and

R<sup>14</sup> is selected from the group consisting of hydrogen, hydroxyl, and benzyl;

(ii) an oligopeptide or peptidomimetic molecule of 1 to 5 amino acids;

(iii) C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>6</sub>-C<sub>10</sub> bicycloalkyl, C<sub>3</sub>-C<sub>7</sub> cycloalkylmethyl, or C<sub>7</sub>-C<sub>10</sub> arylalkyl, which may be additionally substituted with R<sup>11</sup> as defined above;

R<sub>3</sub> is selected from the group consisting of:

- (i) hydrogen, phenyl, hydroxyl, C<sub>1</sub>-C<sub>12</sub> hydrocarbon chain or O-C<sub>1</sub>-C<sub>12</sub>

hydrocarbon chain which may be additionally substituted with at least one R<sup>11</sup> as defined above; and

- (ii) an oligopeptide of 1 to 3 amino acids joined to the backbone by an oxygen or a peptidomimetic;

Z is selected from the group consisting of hydroxyl, sulfhydryl, carboxyl and NHR<sup>11</sup>, wherein R<sup>11</sup> is defined as above;

Z' is selected from the group consisting of:

- (i) hydroxyl, amino, carbamido, carbamyl, carbamyloxy or halogen;

- (ii) hydrogen; and

(iii) C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>3</sub>-C<sub>7</sub> cycloalkenyl, or C<sub>1</sub>-C<sub>3</sub> alkoxy which may be additionally substituted with at least one R<sup>11</sup> as defined above;

alternatively Z' and R<sub>1</sub> collectively form a ring system selected from the group consisting of:

- (a) C<sub>5</sub>-C<sub>8</sub> carbocyclic ring which may be saturated or unsaturated, and which may

be additionally substituted with at least one R<sup>11</sup> as defined above; and

- (b) C<sub>5</sub>-C<sub>10</sub> heterocyclic ring system which may be saturated or unsaturated and

which includes at least one nitrogen, oxygen or sulfur atom, and which may be additionally substituted with at least one R<sup>11</sup> as defined above;

Y and Y' are independently selected from the group consisting of:

- (i) hydrogen, halogen, C<sub>1</sub>-C<sub>4</sub> haloalkyl, or C<sub>1</sub>-C<sub>4</sub> haloalkoxy;

- (ii) carbamyl, carbamido, cyano, COR<sup>11</sup>, vinyl, nitro, SO<sub>2</sub>R<sup>11</sup>, or SOR<sup>11</sup>, wherein

R<sup>11</sup> is defined above;

- (iii) C<sub>1</sub>-C<sub>3</sub> alkyl which may be additionally substituted with at least one R<sup>11</sup> as

defined above; and

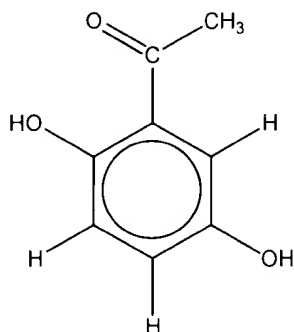
- (iv) an oligopeptide or a peptidomimetic of 1 to 3 amino acids;

and pharmaceutically acceptable salts thereof; with the proviso that when X-R<sub>1</sub> is a fluorinated keto acyl, Z is hydrogen;

for a time and under conditions effective to inhibit replication of said picornavirus.

12. A method according to claim 8, wherein said picornavirus is a rhinovirus.

21. A method of inhibiting picornavirus activity, comprising contacting the picornavirus with a compound of the formula:



or a pharmaceutically acceptable salt thereof for a time and under conditions effective to inhibit replication of said picornavirus.